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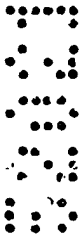
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PLANT CONTAINERS
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A plant container (10) for location around an upstanding post (11) having two parts (12,13) which may be interconnected to define an opening 16 for receiving the post (11). The parts (12,13) may be provided with connection means which enables the parts (12,13) to be slid longitudinally of the post (11) and relative to each other for assembly and disassembly.

# ABSTRACT

A plant container (10) for location around an upstanding post (11) having two parts (12,13) which may be interconnected to define an opening 16 for receiving the post (11). The parts (12,13) may be provided with connection means which enables the parts (12,13) to be slid longitudinally of the post (11) and relative to each other for assembly and disassembly.



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C O M P L E T E   S P E C I F I C A T I O N

FOR A STANDARD PATENT

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Invention title:         PLANT CONTAINERS

Details of Associated Provisional Applications No:PN2695

The following statement is a full description of this invention, including the best method of performing it know to me:-

This invention relates to containers and in one aspect to containers for plants.

The present invention is particularly applicable to containers designed to surround upstanding posts such as veranda posts or poles and to hold one or more living plants. It will however be understood that the containers are applicable to other uses including holding synthetic plants and for placing around other upstanding members including fence posts, small trees or bushes and other objects.

Currently there are in existence many types of containers which are used to hold growing plants. Plant containers are made from a variety of materials, such as terracotta, plastic, metal or wood. Some types have a tray underneath to catch water or matter leaking from the container, whilst other forms of container have a keeper unit which is designed to hold water in the container to keep the plant from drying out. There are self watering units, with rids separating the plant soil and roots from the water cavity. There are also many plant pots designed to be suspended which have chains or rods terminating in a hook or other attachment device. Some plant pots are also designed to fit into special outers or pot holders.

Australian Patent Application No. 17496/88 describes a plant container designed specifically to surround a post. The plant container described in this document includes at least two portions defining receptacles with the two portions being arranged to be connected together around a support member to be supported thereby. For the purposes of interconnection, each portion includes walls which are brought together face to face and fasteners are provided between the walls. A major disadvantage of this arrangement is that the connection between the container portions is in effect permanent, as the soil is required to be removed from the container parts to allow disassembly. This is obviously

inconvenient and can be damaging to plants growing in the container portions, due to disturbance of the roots.

The present invention aims to overcome or alleviate one or more of the above disadvantages or at least to provide  
 5 an alternative to the prior art by providing in one aspect a plant container which may be easily located about a post or other upstanding member and which may be readily detached from that position. Whilst the invention however is particularly suited to plant containers, it may also be  
 10 applied to other containers which are adapted to locate about or support an upstanding post or other member. Other objects and advantages of the invention will become apparent hereunder.

The present invention thus provides a container  
 15 comprising at least two container parts, said parts being adapted to be assembled and juxtaposed to define therebetween an opening for receipt of an upstanding member or the like, whereby said container may be supported to, or may support said upstanding member and connector means adapted to  
 20 interconnect said container parts for maintaining said parts in a juxtaposed relationship and surrounding said upstanding member, said connector means permitting movement of said parts longitudinally relative to said member in opposite directions to enable interconnection between said parts, and  
 25 detachment of said parts respectively.

The container parts when used for a plant container may each define a separate receptacle adapted to receive a growing medium such as soil for plant growing purposes. Alternatively, the receptacles may contain a fluid which  
 30 comprises the growing medium for hydroponic growing. The receptacles preferably are substantially sealed, such that substantial loss of soil therefrom does not occur. The receptacles, however, may be provided with one or more drainage holes in their lower regions preferably in their  
 35 bases for drainage purposes. In a further form, the container parts when interconnected may combine to define a single

receptacle which is of generally annular form for receipt of the plant growing medium for plant growing purposes.

The connector means between the container parts may comprise a tongue and groove type connection on opposite sides of the container parts, such that the container parts may be slid longitudinally into transverse alignment with each other to define the container. Alternatively, the connector means may comprise a slot on one side of each container part and a pin or other member on the opposite side of the container part which is receivable in the slot of the other container part and movable therealong until the container parts are in transverse alignment.

The container parts may include planar wall portions which are adapted to be located in face to face relationship with each other when the container parts are interconnected. The aforesaid slot may be provided in the planar wall portion and the pin or other member may extend from the wall portion.

The opening between the container parts defined when the container parts are in their interconnected attitude may be tapered in cross-section longitudinally so as to enhance the grip of the container part on an upstanding post or the like whereby the juxtaposed container parts may be supported at a suitable position along the post or alternatively support an upstanding post, trellis or the like.

A drainage tray may be provided for location under the container parts to catch any water or soil which may escape from the drainage holes in the lower portions of the container parts. Preferably the trays are also in two or more parts arranged to be interengaged by means of similar connector means to that described above. Alternatively, the tray parts may be brought together and held in a juxtaposed attitude by co-operation with the container parts. Preferably the parts of the container are identical and formed of plastics, such that only one mould is required for

manufacturing purposes. The container parts however, may be in other non identical configurations.

Most commonly, the container is formed of two parts, however, the container may be in two or more parts.

5 The container parts may have an outer half circular wall and an inner substantially planar wall divided by a central curved wall which forms a wall of the opening. The two container parts thus when joined in this embodiment form a container of substantially circular external cross-section  
10 with a central tubular member which surrounds the post or other upstanding member. The container, however, may be of any other configuration including a square or rectangular external wall configuration with a square, rectangular or circular central opening.

15 In order that the invention may be more readily understood and put into practical effect, reference will now be made to the accompanying drawings which illustrate a preferred embodiment of the invention and wherein:-

20 Fig. 1 illustrates the container of the invention assembled around a post or the like;

Fig. 2 is a cross-sectional view along line X-X of Fig. 1;

Fig. 3 is a cross-sectional view along line Y-Y of Fig. 1;

25 Fig. 4 is cross-sectional view along line Z-Z of Fig. 2;

Figs. 5a and 5b illustrate in plan view and cross-sectional view, an alternative form of container according to the present invention;

30 Fig. 6a and 6b illustrate yet a further form of container according to the invention;

Fig. 7 illustrates yet a further form of container according to the invention attached to a post;

35 Fig. 8 is a plan view of the arrangement of Fig. 7;

Fig. 9 is a sectional view along line A-A of

Fig. 8;

Fig. 10 illustrates in perspective view a further form of container according to the present invention;

Fig. 11 illustrates yet a further form of container according to the invention;

Fig. 12 is a sectional view of a container of Fig. 11;

Fig. 13 illustrates the typical connection between the container parts of the container of Fig. 11 and

Fig. 14 illustrates a further embodiment of the invention.

Referring to the drawings and firstly to Figs. 1 to 4 there is illustrated a plant holding container 10 according to the present invention adapted, in this instance to be supported or located around a pole or post 11 of circular cross-section. The container 10 includes two parts 12 and 13, each of which has an outer half circular convex side wall portion 14 and an inner half circular concave wall portion 15, such that when the container parts 12 and 13 are juxtaposed as illustrated in Fig. 1, they define a container 10 having a substantially circular outer wall. The container parts 12 and 13 also define through the wall portions 15 a passage of substantially circular cross-section 16 for receipt of and engagement with the post 11. Each container part 12 and 13 also includes radially extending wall portions 17 which are on opposite sides of the wall portion 15 and which extend outwardly to the wall portion 14. The outer side wall portions 14 are inclined inwardly and downwardly and are inwardly stepped at their lower ends to join a part annular end wall 18 forming the base of the container. The base wall 18, if desired may be apertured for the purposes of drainage. An indent 19 may also be formed in each base wall 18 to extend radially thereof for a purpose which will hereinafter become apparent. The indent 19 preferably tapers in cross-section.

Connection means are provided to interconnect the



two parts 12 and 13 together to form the assembled container 10. A tray or dish assembly 20 which is formed by two parts 21 and 22 may be provided at the base of the container 10. The two parts 21 and 22 have inner radially extending walls 23 which may be juxtaposed and received in the indent 19. The tapering nature of the indent 19 serves to hold the walls 23 together. The walls 23 on opposite sides of the tray parts 21 and 22 join a part circular wall 23'. The tray parts 21 and 22 thus form a moat like trough for water collection purposes. The two parts 21 and 22 locate about the post 11 in a similar manner to that achieved with the parts 12 and 13. The container parts 12 and 13 define substantially closed receptacles 24 and 25 which may contain soil or other plant growing medium such as liquid in which plants may grow. In this embodiment, the receptacles 24 and 25 of the respective container parts 12 and 13 are separate from each other and no communication exists therebetween.

The container parts 12 and 13 are adapted to be connected by means of a connection arrangement which permits the parts 12 and 13 to be positioned around the post 11 and moved longitudinally relative to the post 11 towards each other for connection purposes or away from each other for disassembly and disconnection. Typical connection arrangements between the container parts 12 and 13 are shown in Figs. 5 and 6.

In the arrangement shown in Fig. 5a and 5b, the outer wall portions 14 of each container part 12 and 13 terminate on one side in a longitudinally extending outwardly directed groove 26 and on the opposite side in a longitudinally extending inwardly directed tongue 27 adapted to be received in the groove 26 of the other part 12 or 13. The parts 12 and 13 are thus capable of being engaged and moved longitudinally relative to each other through the tongue and groove connection described to a position where they are transversely aligned to define an assembled container.

In the arrangement of Fig. 6a and 6b, one of the wall portions 17 is provided with a longitudinally extending slot 28 which extends downwardly from the top edge thereof parallel to the central axis of the container and the opposite wall portion 17 is provided with an outwardly extending pin 29 which has an enlarged head 30. For assembly purposes, the pin 29 is located in the slot 28 and slid longitudinally thereof for providing connection between the container parts, the enlarged heads 30 of the pins 29, being wider than the slot 28, maintaining the wall portions 17 in a juxtaposed attitude. In containers of this design, disassembly is by simply moving or sliding the two parts 12 and 13 relative to each other in a direction opposite to the connection direction.

It will be apparent in the embodiment of Fig. 5 that the container parts are open on their inner side, such that when assembled they define a closed receptacle. In the embodiment of Fig. 6, the container parts when assembled define a pair of receptacles which are separate.

In a further embodiment shown in Figs. 7 to 12 the container parts define separate substantially sealed receptacles.

Referring to Figs. 7 to 9 is illustrated an alternative form of container 31 according to the present invention which is mounted on a post 32 of square cross-sectional form, such as a timber post. The container 31 as shown in Fig. 7 contains soil in which plants 33 may grow. As with the embodiments described above, the container 31 includes a pair of container parts 34 and 35 as shown in Figs. 8 and 9 which are adapted to be interconnected to define the assembled container 31. The parts 35 are of similar form to that described with reference to Figs. 1 to 4, including an outer wall 36 with half circular cross-section, an inner radial wall 37 which is centrally indented at 38. The wall 37 on one side of the indent 38 includes a downwardly extending slot 39, whilst the wall 37 on the upper

side of the indent 38 includes an outwardly extending headed pin 40 which is receivable in the slot 39 of the other part 35. The part 35 may be brought together so that the pin 40 of one part locates in the slot 39 of the other part, 5 whereupon the parts 34 and 35 may be slid longitudinally towards each other and in opposite directions along the pole or post 32 so as to be interconnected through the pin slot engagement described forming the assembled container 31. The indents 38 in the wall portions 37 combine to define an 10 opening or passage 41 of square cross-section which neatly engages around the post 32. The opening 41 may be sized, such that when around the post 32, the walls of the indents 38 firmly about or against the post 32.

A water catching tray assembly 42 may be associated 15 with the container 31 and include a pair of parts 43 of identical form which locate on opposite sides of the post 32 and co-operate to define the water catching tray 42. A fastener, such as a nail 44 may be used to secure the tray 41 at a set position along the post 32 to set the desired height 20 of the container 31 being supported by the tray 41. The tray parts 43 may be in similar form to that shown in Fig. 4.

In the embodiment of Figs. 7 to 9 the indent 38 combined to define an opening of square cross-section. In the embodiment of Fig. 10 however, the indents 38 are of half 25 circular form in cross-section and combine to define a circular opening 45 for location about a pole or post 46 of circular cross-section. In this embodiment also, it will be apparent that the walls 47 of the indents 38, which surround the post 45, extends above the level of the walls 37. This 30 reduces the possibility of soil or moisture coming into contact with the post 46 and potential rotting or damage to the post 46. In addition, the tray 48 is formed to define an enlarged region 49 which permits watering from the side of the container.

35 Referring now to Figs. 11 to 13, there is illustrated a further form on container 50 according to the

present invention which is of generally square form defining a tapering opening 51 centrally of the container 50 of square cross-section. This embodiment is similar to the embodiments of Figs. 7 to 10, except in this instance the headed pin is replaced by a headed projection 52 from one of the radial walls which is receivable into a slot 53 in the other radial wall on both sides of the container to interconnect the parts.

The enlarged head of the projection 52 is spaced from its supporting wall 54 a distance substantially the same as the width of the wall 54 such that in the engaged position of Fig. 13, the head of the projection 52 maintains the respective walls 54 in face to face engagement. Of course a similar connection arrangement is provided on both sides of the container 50 to interconnect the walls 54 on both sides. As with the embodiments described above, the container 10 may be associated with a water catching tray 55 which may be of similar form to that previously described or may be attached to the container parts of the container 50 by means of rivets or other fasteners 56.

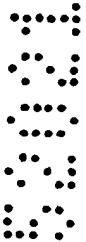
Fig. 14 illustrates an alternative embodiment of the invention where the container 57 is in a two part form as previously described but in this case, it supports a upstanding post 58 which serves as a trellis like member up which plants may grow. In this container 57, an indent 59 may be provided in the side wall thereof to enable access to the tray 59 for watering purposes.

It will be appreciated that the container of the invention may be in many different configurations and designs. It may have circular, rectangular, triangular or any shaped side walls, whilst the inner passages defined by the containers may be square, rectangular, circular or of any other configuration. The containers may be provided with water catching trays as described or may be provided without such trays. The containers while particularly suitable for growing plants may be used in any other application where

location of a container around an upstanding post or pole is required and where ready detachment of the container parts and assembly of the container parts is required.

Whilst two different connection arrangements are shown for interconnecting the container parts, it will be appreciated that many other connection arrangements may be provided enabling one container part to be moved axially relative to the other container part for engagement or disengagement.

Whilst the above has been given by way of illustrative embodiment of the invention, all such modifications and variations thereto as would be apparent to persons skilled in the art are deemed to fall within the broad scope and ambit of the invention as defined in the appended claims.



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THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A container for containing a plant and associated earth which can be mounted to a support post, the container including:
  - 5 a plurality of container parts which when arranged relative to each other to form a container define an opening for receiving a support post therethrough, each container part having complementary attachment formations on each side thereof for attaching adjacent said parts together, said complementary attachment formations permitting the parts to be slid longitudinally relative to each other to effect releasable attachment with
    - 10 each other in position surrounding a support post, and also detachment from each other.
- 15 2. A container according to Claim 1 wherein each said part defines a separate receptacle adapted to receive a growing medium for plant growing purposes.
3. A container according to Claim 2 wherein said
  - 20 receptacles are provided with one or more drainage holes.
4. A container according to Claim 1 wherein said container parts when interconnected define a single receptacle for receipt of a growing medium for plant growing
  - 25 purposes.
5. A container according to any one of the preceding claims wherein said connector means comprise a tongue and groove type connection on opposite sides of said container
  - 30 parts whereby said container parts may be slid longitudinally into transverse alignment with each other to define said container.
6. A container according to any one of Claims 1 to 4
  - 35 wherein said connector means comprises a slot on one side of each container part and a pin or other member on the opposite

side of said container part which is receivable for slidable movement in a said slot of a further said container part.

7. A container according to any one of the preceding  
5 claims wherein said container parts include planar wall portions which are disposed in face to face engagement with each other when said container parts are interconnected to define said container.

10 8. A container according to any one of the preceding claims wherein said opening between said container parts defined when said container parts are interconnected is tapered in cross-section longitudinally.

15 9. A container according to any one of the preceding claims and including a drainage tray adapted to be located beneath said container parts.

10. A container according to Claim 9 wherein said tray  
20 comprises two or more parts adapted to be juxtaposed and surround said upstanding post or the like.

11. A container according to Claim 10 wherein said tray parts are adapted to be held in a juxtaposed attitude by co-  
25 operation with said container parts.

12. A container substantially as hereinbefore described with reference to the accompanying drawings.

Dated this second day of May 1996

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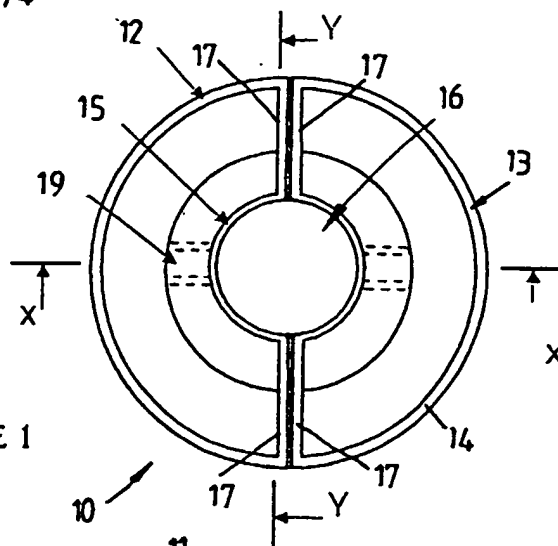


FIGURE 1

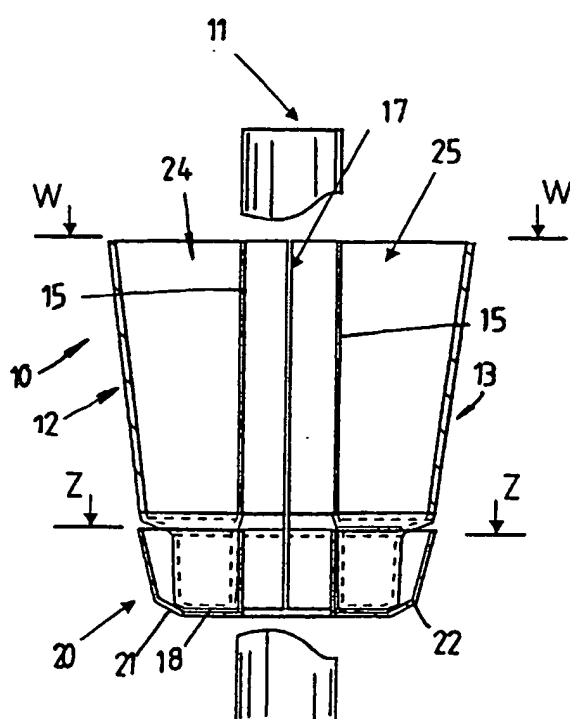


FIGURE 2

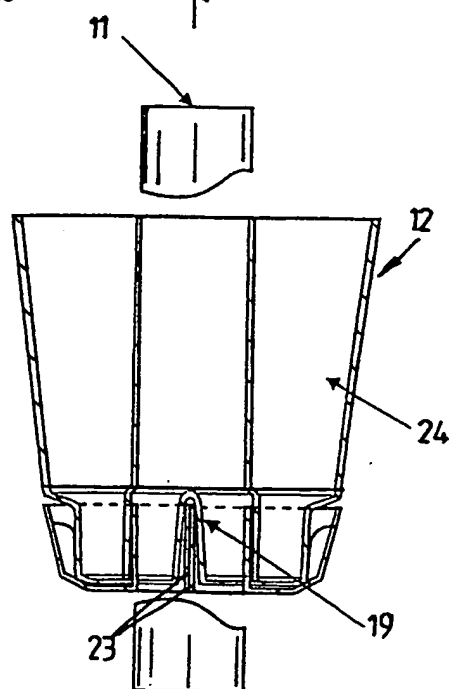


FIGURE 3

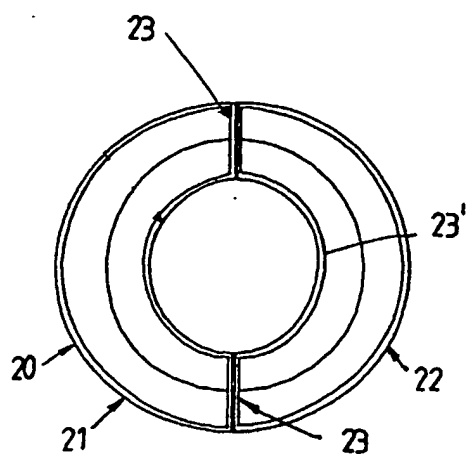


FIGURE 4



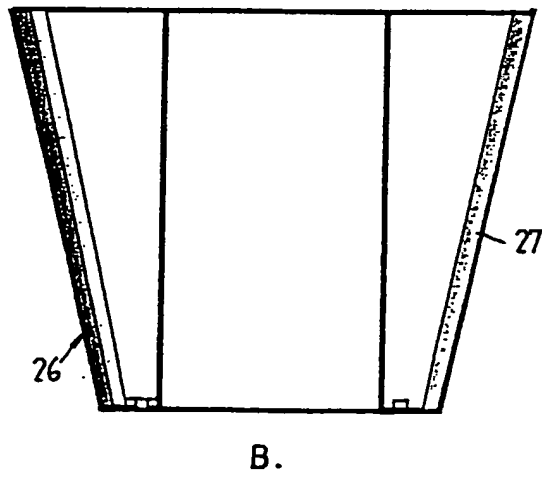
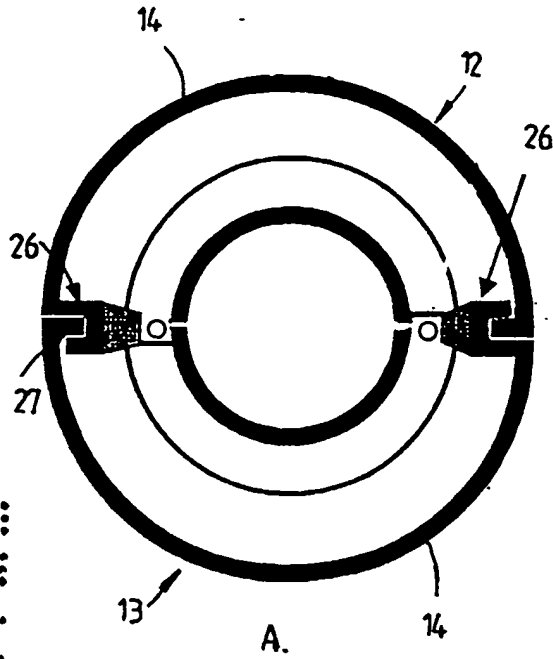


FIGURE 5

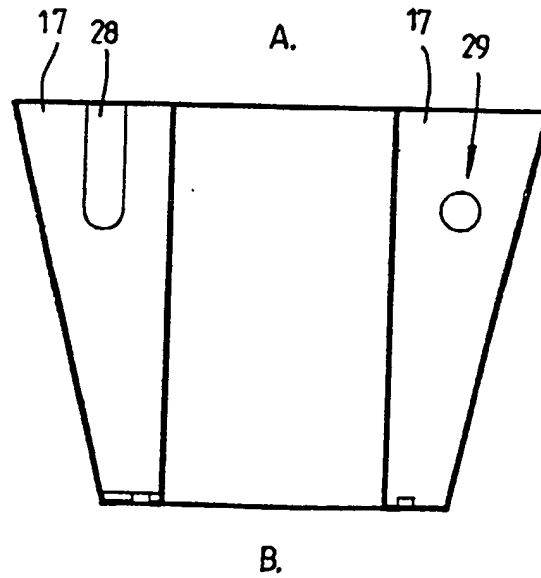
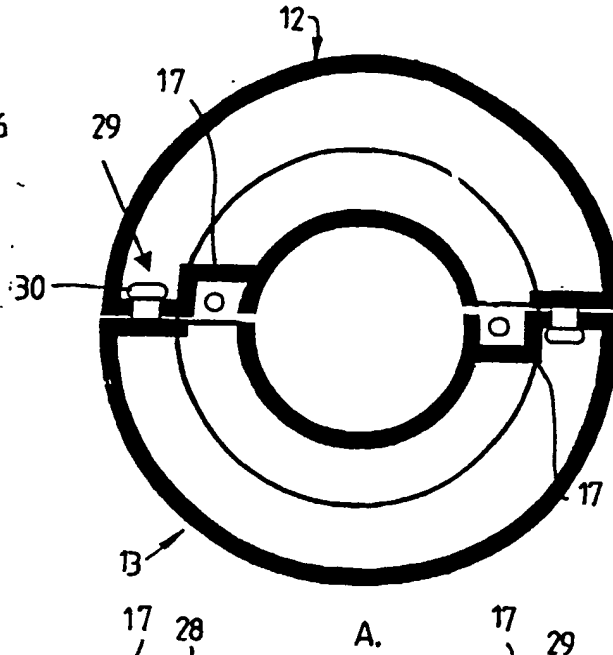


FIGURE 6

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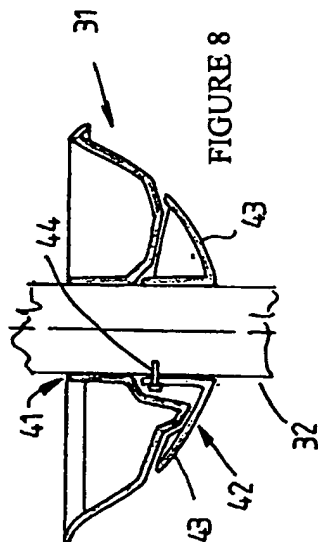


FIGURE 8

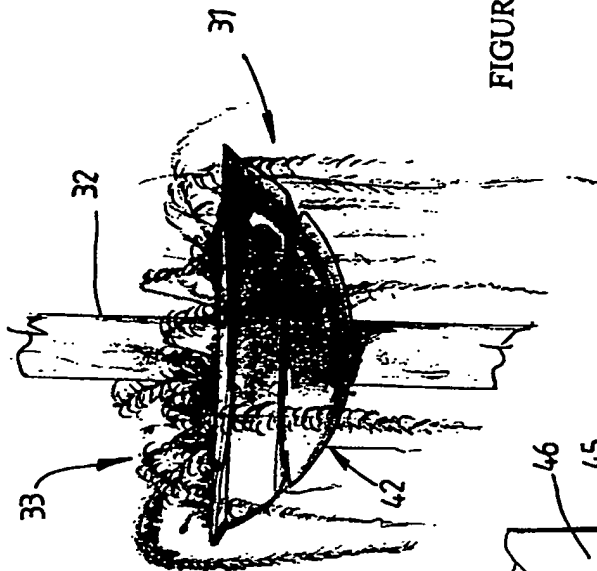


FIGURE 7

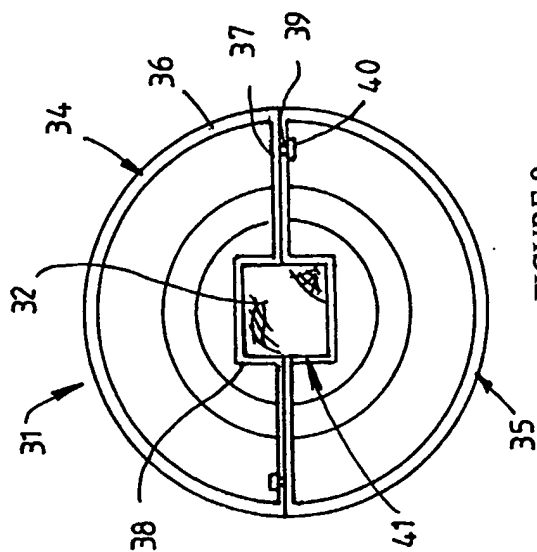


FIGURE 9

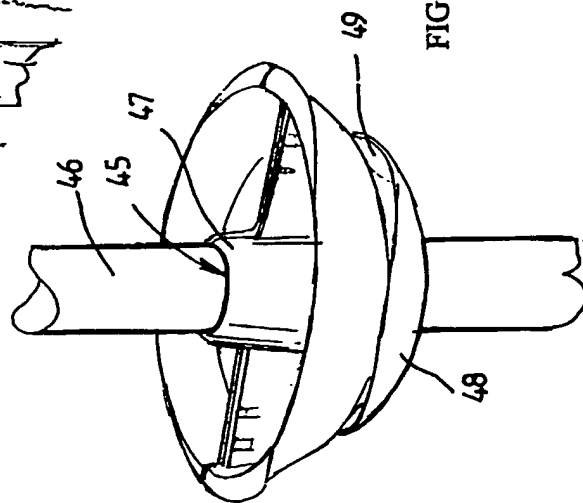


FIGURE 10

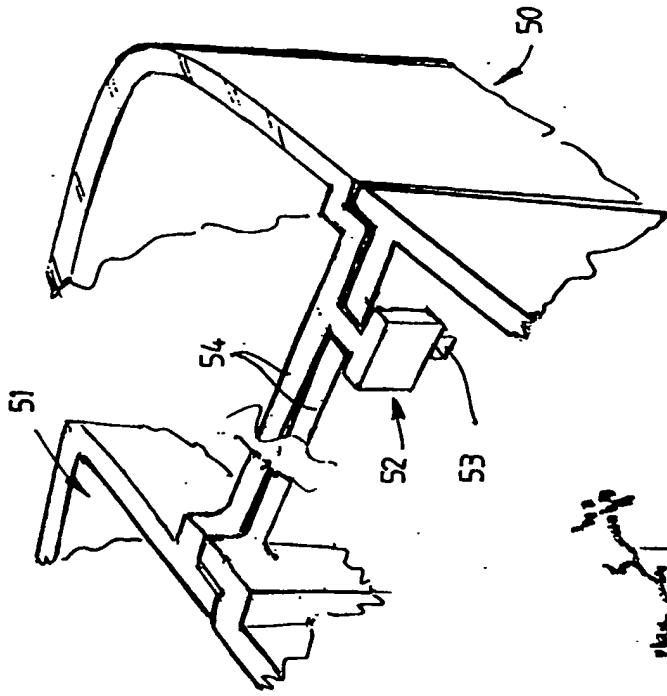


FIGURE 13

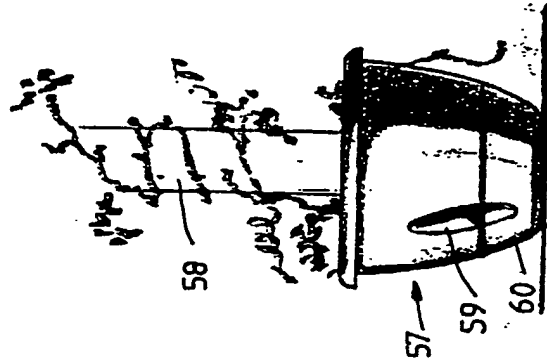


FIGURE 14

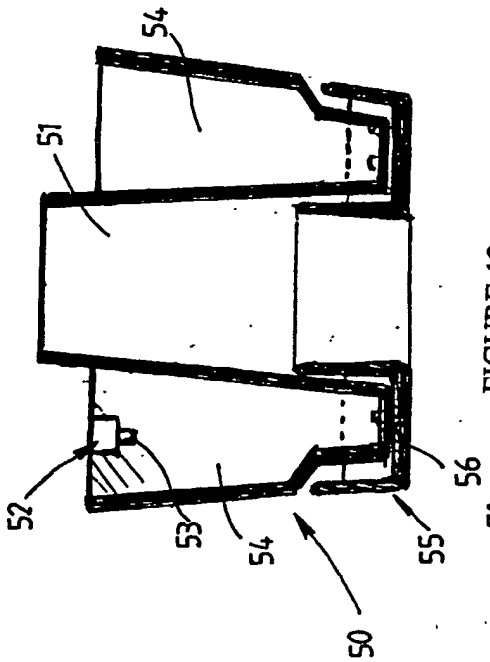


FIGURE 11

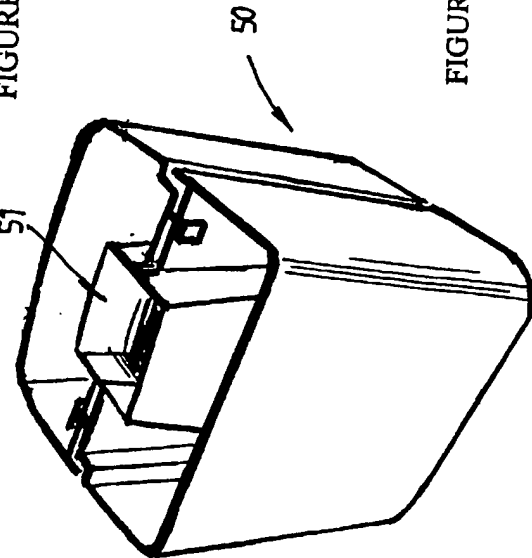


FIGURE 12